

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/01/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 8-9, 14-15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (JP09-190306) in view of Yasuda (JP05-083324), Shima (US Patent#6333789), and Miyasaka et al. (US2001/0022912).

Regarding claim 1, Mochizuki teaches a transmission apparatus (100 of Fig. 1) comprising:

a transmission unit (150 of Fig. 1) configured to transmit one of first data and a command, the first data having first identification information (inherent for data identification), wherein the first data and the command are incapable of being transmitted simultaneously (between 640 and 651 of Fig. 6);

an input unit (131 of Fig. 1) configured to input one of a first instruction to transmit the first data and a second instruction to transmit the command (Fig. 6);

a first control unit (610 of Fig. 6) configured to control the transmission unit to start a first transmission of the first data if the input unit inputs the first instruction (Fig. 6); and

a second control unit (622 of Fig. 6) configured to control the transmission unit to start a second transmission of the command if the input unit inputs the second instruction and the transmission unit has completed transmitting the first data, to control the transmission unit not to start the second transmission if the transmission unit has not completed transmitting the first data (paragraphs 0002-0004, where obviously the command generated cannot be transmitted until transmission completion of the first data because of queuing in spooler).

Note that Mochizuki discloses two different modes for choosing, where the second mode directs created control command to the spooler for conventional transmission queuing (Figs. 4-5, paragraph 0047).

But, Mochizuki does not expressly disclose the command having second identification information for identifying the first data; and to control the transmission unit to interrupt a third transmission of second identification information of the command and to start the second

transmission if the transmission unit is transmitting the third transmission of the second data and the transmission unit has completed transmitting the first data.

Yasuda teaches interrupting ongoing data transmission to start emergency data transmission (abstract, paragraphs 0006-0007).

Shima teaches prioritizing a control command over ongoing data transmission to stop a print job (column 2 lines 42-59), which would have been obvious to one of ordinary skill in the art to recognize that Yasuda's emergency data transmission could be the scenario of Shima to prevent wasting resources.

In a scenario where the transmission unit has completed transmitting a first data and the transmitting unit is transmitting a second data, clearly in the spooler of Mochizuki there is only the second data in front of a control command that corresponds to the transmitted first data. In view of Yasuda and Shima, it would have been obvious to one of ordinary skill in the art to recognize and incorporate the priority control unit of Yasuda (7 of Fig. 1) into the transmission apparatus of Mochizuki, in order to interrupt the transmission of the second data (clearly does not correspond to the control command) and start another transmission to transmit the control command to catch up with the first data that has already been transmitted completely.

Miyasaka et al. teaches control command received by printer contains information identifying what specific print data received as well (paragraphs 0070, 0075), which obviously teaches that in Mochizuki the command having second identification information for identifying the first data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate corresponding data and command taught by Miyasaka et al. and

interrupting ongoing transmission and prioritizing control command transmission taught by Yasuda and Shima into the transmission apparatus of Mochizuki, in order to prioritize important control command transmission to coordinate transmitted data.

Regarding claim 13, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach a transmission method as explained in response to claim 1 above.

Regarding claim 17, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach a computer readable storage medium storing instructions of a computer program which when executed by a computer system results in performance of steps as explained in response to claim 13 above.

Regarding claims 2, 14, and 18, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitations of claims 1, 13, and 17.

Yasuda teaches further comprising a third control unit configured to control the transmission unit to resume the third transmission interrupted by the second control unit, the third transmission interrupted being restarted after the command has been transmitted (paragraphs 0007, 0011, 0015, 0058).

Regarding claims 3, 15, and 19, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitation of claim 1.

Mochizuki teaches further comprising a third control unit configured to control the transmission unit to sequentially transmit a plurality of data items of the first data and the second data (paragraphs 0002-0004).

Regarding claim 8, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitation of claim 1.

Mochizuki teaches the first data and the second data are image data (abstract).

Regarding claim 9, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitation of claim 8.

Mochizuki teaches the input unit inputs designation of to-be-transmitted image data of the image data (inherent), where printer driver (112 of Fig. 1) is initiated by application (111 of Fig. 1).

4. Claims 4-6, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (JP09-190306) in view of Yasuda (JP05-083324), Shima (US Patent#6333789), Miyasaka et al. (US2001/0022912) and Kondo et al. (JP10-098605).

Regarding claims 4, 16, and 20, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitations of claims 1, 13, and 17.

But, Mochizuki, Yasuda, Shima, and Miyasaka et al. do not expressly disclose wherein the input unit inputs the second instruction and the transmission unit has completed transmitting the first data having the third identification information corresponding to the second identification

information of the command, the second control unit determines whether or not the third transmission should be interrupted, the second control unit controlling the transmission unit to start the second transmission after the third transmission has been completed if the second control unit determines that the third transmission should be uninterrupted.

Kondo et al. teach when the input unit inputs the second instruction and the transmission unit transmits the data, the second control unit determines whether or not the third transmission should be interrupted, the second control unit controlling the transmission unit to start the second transmission after the third transmission is completed if the second control unit determines that the third transmission should be uninterrupted (Fig. 4, paragraphs 31-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate means to determine whether the third transmission should be interrupted taught by Kondo et al. into the apparatus, method, and program of Mochizuki, Yasuda, Shima, and Miyasaka et al., in order to determine transmission priority.

Regarding claim 5, Mochizuki, Yasuda, Shima, Miyasaka et al., and Kondo et al. teach the limitation of claim 4.

Kondo et al. teach if the input unit inputs the second instruction and the transmission unit has completed transmitting the first data having the third identification information corresponding to the second identification information of the command, the second control unit determines whether or not the third transmission should be interrupted, the second control unit determining that the third transmission should be interrupted if a value obtained by dividing an amount of transmitted part of the first data by an entire amount of the first data is less than a threshold

value, the second control unit also determining that the third transmission should be uninterrupted if the value obtained is not less than the threshold value (paragraph 0052).

Regarding claim 6, Mochizuki, Yasuda, Shima, Miyasaka et al., and Kondo et al. teach the limitation of claim 4.

Kondo et al. teach if the input unit inputs the second instruction and the transmission unit has completed transmitting the first data having the third identification information corresponding to the second identification information of the command, the second control unit determines whether or not the third transmission should be interrupted, the second control unit determining that the third transmission should be interrupted if an estimated period of time for completing the third transmission is not less than a threshold value, the second control unit also determining that the third transmission should be uninterrupted if the estimated period is less than the threshold value (Fig. 5, paragraphs 0035-0042).

5. Claims 7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (JP09-190306) in view of Yasuda (JP05-083324), Shima (US Patent#6333789), Miyasaka et al. (US2001/0022912) and Yamaguchi et al. (US2002/0101443).

Regarding claim 7, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitation of claim 1.

But, Mochizuki, Yasuda, Shima, and Miyasaka et al. do not expressly disclose the transmission unit utilizes a radio communication technique called Bluetooth (registered trademark).

Yamaguchi et al. teaches the transmission unit utilizes a radio communication technique called Bluetooth to transmit desired data to a desired correspondent (paragraph 0024).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Bluetooth transmission taught by Yamaguchi et al. into the apparatus of Mochizuki, Yasuda, Shima, and Miyasaka et al., in order to utilize short-range wireless communication.

Regarding claim 10, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitation of claim 8.

But, Mochizuki, Yasuda, Shima, and Miyasaka et al. do not expressly disclose the command includes an image display command used to command the receiving apparatus to display an image of first image data included in the image data already transmitted to the receiving apparatus.

Yamaguchi et al. teach the command includes an image display command used to command the receiving apparatus to display an image of first image data included in the image data already transmitted to the receiving apparatus (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate commanding display unit to display received image data taught by Yamaguchi et al. into the apparatus of Mochizuki, Yasuda, Shima, and Miyasaka et al., in order to shorten display wait time in coordinating with a display unit.

Regarding claim 11, Mochizuki, Yasuda, Shima, Miyasaka et al., and Yamaguchi et al. teach the limitation of claim 10.

Yamaguchi et al. teach the input unit designates the first image data to display the image by the image display command if the input unit inputs an instruction to transmit the image display command (abstract).

Regarding claim 12, Mochizuki, Yasuda, Shima, and Miyasaka et al. teach the limitation of claim 1.

But, Mochizuki, Yasuda, Shima, and Miyasaka et al. do not expressly disclose further comprising a transfer unit configured to transfer the image data based on an Initiator function of Remote Display feature incorporated in Basic Imaging Profile of Bluetooth (registered trademark), transmission of the image data, transmission of the image display command and interruption of the transmission of the image data being performed, using a PutImage function incorporated in the Profile, a Remote Display function incorporated in the Profile, and an Abort operation incorporated in Generic Object Exchange Profile, respectively.

Yamaguchi et al. teach using Bluetooth communication method between the commanding unit and display unit (paragraph 0024), which inherently teaches the limitation of further comprising a transfer unit configured to transfer the image data based on an Initiator function of Remote Display feature incorporated in Basic Imaging Profile of Bluetooth (registered trademark), transmission of the image data, transmission of the image display command and interruption of the transmission of the image data being performed, using a PutImage function incorporated in

the Profile, a Remote Display function incorporated in the Profile, and an Abort operation incorporated in Generic Object Exchange Profile, respectively.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate using Bluetooth communication and its profiles taught by Yamaguchi et al. into the apparatus of Mochizuki, Yasuda, Shima, and Miyasaka et al., in order to efficiently utilize Bluetooth wireless communication for image data and command transmission.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. L./
Examiner, Art Unit 2618

Zhiyu Lu
June 12, 2008

/Nay A. Maung/
Supervisory Patent Examiner, Art Unit
2618